

CLAIMS

1. Method comprising: supplying a continuous web of film having a leading edge and first and second, spaced, longitudinal edges; moving the web of film through a first portion of a path, with the web of film being under tension in the first portion of the path; substantially cutting the web of film in the first portion between the first and second longitudinal edges to form a single sheet of film having a trailing edge spaced from the leading edge and creating a new leading edge on the web of film, with the trailing edge and new leading edge being connected together by a plurality of tie strips to maintain tension of the web of film in the first portion of the path after cutting; conveying the substantially cut web of film on a vacuum table; and breaking the tie strips between the single sheet of film and the new leading edge on the vacuum table by pushing on the web of film at the trailing edge faster than the substantially cut web of film being conveyed on the vacuum table and placing tensional forces on the tie strips which exceed tensional strength of the tie strips.

2. The method of claim 1 wherein moving the web of film through the first portion comprises passing the web of film between first and second pairs of pinch rollers.

3. The method of claim 2 wherein substantially cutting the web comprises: providing a rotary cutter including a knife having a laterally extending cutting edge of a size at least equal to the spacing between the longitudinal edges of the web of film, with the cutting edge including a plurality of laterally spaced notches; and rotating the cutter to engage the cutting edge of the knife with the web of film with the cutting edge not severing the web of film in the notches and thereby forming the tie strips between the single sheet of film and the new leading edge of the web of film.

4. The method of claim 3 with pushing on the web comprising:

providing a rotatable tie strip breaker rotatable between a disengaged position and an engaged position, with the tie strip breaker in the disengaged portion not interfering with the substantially cut web of film being conveyed on the vacuum table, with the strip breaker in the engaged position engaging with the substantially cut web of film being conveyed on the vacuum table; and

rotating the tie strip breaker to engage the substantially cut web of film being conveyed on the vacuum table at the trailing edge and at a speed faster than the substantially cut web of film is being conveyed on the vacuum table.

5. The method of claim 4 with providing the rotatable tie strip comprising providing a roller including a kicker plate for engaging with the substantially cut web of film being conveyed on the vacuum table.

6. The method of claim 1 wherein substantially cutting the web comprises: providing a rotary cutter including a knife having a laterally extending cutting edge of a size at least equal to the spacing between the longitudinal edges of the web of film, with the cutting edge including a plurality of laterally spaced notches; and rotating the cutter to engage the cutting edge of the knife with the web of film with the cutting edge not severing the web of film in the notches and thereby forming the tie strips between the single sheet of film and the new leading edge of the web of film.

7. The method of claim 6 with pushing on the web comprising:
providing a rotatable tie strip breaker rotatable between a disengaged position and an engaged position, with the tie strip breaker in the disengaged portion not interfering with the substantially cut web of film being conveyed on the vacuum table, with the strip breaker in the engaged position engaging with the substantially cut web of film being conveyed on the vacuum table; and

rotating the tie strip breaker to engage the substantially cut web of film being conveyed on the vacuum table at the trailing edge and at a speed faster than the substantially cut web of film is being conveyed on the vacuum table.

8. The method of claim 7 with providing the rotatable tie strip comprising providing a roller including a kicker plate for engaging with the substantially cut web of film being conveyed on the vacuum table.

9. The method of claim 1 with pushing on the web comprising:
providing a rotatable tie strip breaker rotatable between a disengaged position and an engaged position, with the tie strip breaker in the disengaged portion not interfering with the substantially cut web of film being conveyed on the vacuum table, with the strip breaker in the engaged position engaging with the substantially cut web of film being conveyed on the vacuum table; and

rotating the tie strip breaker to engage the substantially cut web of film being conveyed on the vacuum table at the trailing edge and at a speed faster than the substantially cut web of film is being conveyed on the vacuum table.

10. The method of claim 9 with providing the rotatable tie strip comprising providing a roller including a kicker plate for engaging with the substantially cut web of film being conveyed on the vacuum table.

11. Apparatus comprising, in combination: means for supplying a continuous web of film having a leading edge and first and second, spaced, longitudinal edges; means for moving the web of film through a first portion of a path, with the web of film being under tension in the first portion of the path; means for substantially cutting the web of film in the first portion between the first and second longitudinal edges to form a single sheet of film having a trailing edge spaced from the leading edge and creating a new leading edge on the web of film, with the trailing edge and new leading edge being connected together by a plurality of tie strips to maintain tension of the web of film in the first portion of the path after cutting; a vacuum table conveying the single sheet of film after the first portion of the path; and a tie strip breaker pushing on the continuous web of film at the trailing edge faster than the vacuum table conveys the single sheet of film to place tensional force on the tie strips exceeding the tensional strength of the tie strips and breaking the tie strips.

12. The apparatus of claim 11 with the tie strip breaker being rotatable between a disengaged position and an engaged position, with the tie strip breaker in the disengaged portion not interfering with the substantially cut web of film being conveyed on the vacuum table, with the strip breaker in the engaged position engaging with the substantially cut web of film being conveyed on the vacuum table, with the tie strip breaker being rotated to engage the substantially cut web of film being conveyed on the vacuum table at the trailing edge and at a speed faster than the substantially cut web of film is being conveyed on the vacuum table.

13. The apparatus of claim 12 with the tie strip breaking comprising a roller including a kicker plate for engaging with the substantially cut web of film being conveyed on the vacuum table.

14. The apparatus of claim 13 wherein the substantially cutting means comprises a rotary cutter comprising, in combination: a mounting block rotatable about a laterally extending axis; a knife secured to and rotatable with the mounting block and having a laterally extending cutting edge of a size at least equal to the spacing between the longitudinal edges of the web of film, with the cutting edge of the knife engaging the web of film when the mounting block is rotated; and at least a first blade secured to

the mounting block spaced from the knife and rotatable with the mounting block, with the blade having a plurality of laterally spaced cutting edges, with the cutting edges of the blade engaging the web of film when the mounting block is rotated and leaving unsevered portions of the web of film between the cutting edges of the blade.

15. The apparatus of claim 14 wherein the cutting edge of the knife includes a plurality of laterally spaced notches, with the web of film not being severed in the notches when the cutting edge of the knife engages the web of film and thereby forming the tie strips extending across the cut created by the knife.

16. The apparatus of claim 15 further comprising, in combination: a second blade secured to the mounting block spaced from the knife and rotatable with the mounting block, with the knife located parallel to the first blade with their cutting edges extending in opposite directions, with the second blade extending at an acute angle from the first blade in the direction of rotation of the mounting block.

17. The apparatus of claim 11 wherein the substantially cutting means comprises a rotary cutter comprising, in combination: a mounting block rotatable about a laterally extending axis; a knife secured to and rotatable with the mounting block and having a laterally extending cutting edge of a size at least equal to the spacing between the longitudinal edges of the web of film, with the cutting edge of the knife engaging the web of film when the mounting block is rotated; and at least a first blade secured to the mounting block spaced from the knife and rotatable with the mounting block, with the blade having a plurality of laterally spaced cutting edges, with the cutting edges of the blade engaging the web of film when the mounting block is rotated and leaving unsevered portions of the web of film between the cutting edges of the blade.

18. The apparatus of claim 17 wherein the cutting edge of the knife includes a plurality of laterally spaced notches, with the web of film not being severed in the notches when the cutting edge of the knife engages the web of film and thereby forming the tie strips extending across the cut created by the knife.

19. The apparatus of claim 18 further comprising, in combination: a second blade secured to the mounting block spaced from the knife and rotatable with the mounting block, with the knife located parallel to the first blade with their cutting edges extending in opposite directions, with the second blade extending at an acute angle from the first blade in the direction of rotation of the mounting block.